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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/658,370	09/10/2003	Takashi Yamazaki	008312-0305862	3316

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PILLSBURY WINTHROP SHAW PITTMAN, LLP
P.O. BOX 10500
MCLEAN, VA 22102

EXAMINER

HUSON, MONICA ANNE

ART UNIT PAPER NUMBER

1732

DATE MAILED: 07/25/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

10/658,370

Applicant(s)

YAMAZAKI ET AL.

Examiner

Monica A. Huson

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 09 May 2006.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 2,3,5 and 6 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 2,3,5 and 6 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 10 September 2003 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some * c) ☐ None of:
- 1) ☒ Certified copies of the priority documents have been received.
 - 2) ☐ Certified copies of the priority documents have been received in Application No. _____.
 - 3) ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|-------------------------------------------------------------------------------------------------------------------------------------------|-----------------------------------------------------------------------------------------|
| 1) <input type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date <u>040706</u> | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

This office action is in response to the Amendment filed 9 May 2006.

Due to Applicant's filing of a Terminal Disclaimer, the Double Patenting Rejection has been overcome.

Due to Applicant's amendment to claim 6, the Objections thereto have been overcome.

Claim Rejections - 35 USC § 102

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –
(e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

Claims 2 and 3 are rejected under 35 U.S.C. 102(e) as being anticipated by Kamiguchi et al. (U.S. Patent 6,527,534).

Regarding Claim 2, Kamiguchi et al., hereafter "Kamiguchi," show that it is known to carry out a method of detecting a malfunction in an electric injection molding machine, the method being applied to the ejection of a molded product by pushing an ejector pin out of a die (Abstract), the method comprising obtaining a pattern characterizing torque of an ejector pin driving motor relative to time (Figure 5); setting in advance at least one monitoring zone based on the pattern and the upper and lower limits of torque in each of the monitoring zones (Figure 5; Column 4, lines 45-50; Column 5, lines 51-57); and monitoring a torque value in each of the monitoring zones during ejection of the molded product and determining that a malfunction occurs when the torque value falls outside the upper and lower limits of the monitoring zones,

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and counting the number of malfunctions (Figure 5; Column 1, lines 62-65; Column 4, lines 45-50; Column 5, lines 4-10, 52-57; Column 8, lines 64-67; Column 9, lines 1-9); and raising an alarm when the number of malfunctions during a single ejection reaches a predetermined number (Column 1, lines 62-65; Column 9, lines 1-9; It is noted that the “predetermined number” of malfunctions is interpreted as being able to include one (1) malfunction.).

Regarding Claim 3, Kamiguchi shows that it is known to carry out a method of detecting a malfunction in an electric injection molding machine, the method being applied to the ejection of a molded product by pushing an ejector pin out of a die (Abstract), the method comprising obtaining a pattern characterizing torque of an ejector pin driving motor relative to time (Figure 5); setting in advance at least one monitoring zone based on the pattern and the upper and lower limits of torque in each of the monitoring zones (Figure 5; Column 4, lines 45-50; Column 5, lines 51-57); and monitoring a torque value in each of the monitoring zones during the ejection of the molded product and determining that a malfunction has occurred when the torque value falls outside the upper and lower limits of the monitoring zones, and counting the number of malfunctions (Figure 5; Column 1, lines 62-65; Column 4, lines 45-50; Column 5, lines 4-10, 52-57; Column 8, lines 64-67; Column 9, lines 1-9); and raising an alarm when the number of malfunctions occurring within a predetermined time reaches a predetermined number (Column 1, lines 62-65; Column 9, lines 1-9; It is noted that the “predetermined number” of malfunctions is interpreted as being able to include one (1) malfunction. It is further noted that the “predetermined time” is interpreted as being able to include the time for a single ejection step.).

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

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(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Claims 5 and 6 are rejected under 35 U.S.C. 103(a) as being unpatentable over Kamiguchi, in view of Ohno et al. (U.S. Patent 5,492,658).

Regarding Claim 5, Kamiguchi shows that it is known to carry out a method of detecting a malfunction in an electric injection molding machine, the method being applied to the ejection of a molded product by pushing an ejector pin out of a die (Abstract), the method comprising obtaining a pattern characterizing torque of an ejector pin driving motor relative to time (Figure 5); setting in advance at least one monitoring zone based on the pattern and the upper and lower limits of torque in each of the monitoring zones (Figure 5; Column 4, lines 45-50; Column 5, lines 51-57); and monitoring a torque value in each of the monitoring zones during the ejection of the molded product and determining that a malfunction has occurred when the torque value falls outside the upper and lower limits of the monitoring zones, and counting the number of malfunctions (Figure 5; Column 1, lines 62-65; Column 4, lines 45-50; Column 5, lines 4-10, 52-57; Column 8, lines 64-67; Column 9, lines 1-9); and raising an alarm when the number of malfunctions in a single ejection step reaches a predetermined number (Column 1, lines 62-65; Column 9, lines 1-9; It is noted that the "predetermined number" of malfunctions is interpreted as being able to include one (1) malfunction.). Kamiguchi shows using an electric machine, and he does not show using a hydraulic-equipped machine. Ohno shows that it is known to carry out an injection molding control sequence, wherein the functionally-similar control parameters can be applied to both electric and hydraulic machines (Column 2, lines 22-27, 33-34; Column 3, lines 38-48; It is interpreted that hydraulic pressure of an ejector pin would be functionally equivalent to torque of an ejector pin. It is interpreted that an

electric motor would be functionally equivalent to a hydraulic pump. It would have been prima facie obvious to one of ordinary skill in the art at the time the invention was made to use Ohno's doctrine of equivalence in Kamiguchi's control process in order to make the control process applicable to a wider variety of molding machines.

Regarding Claim 6, Kamiguchi shows that it is known to carry out a method of detecting a malfunction in an electric injection molding machine, the method being applied to ejection of a molded product by pushing an ejector pin out of a die (Abstract), the method comprising obtaining a pattern characterizing torque of an ejector pin driving motor relative to time (Figure 5); setting in advance at least one monitoring zone based on the pattern and the upper and lower limits of torque in each of the monitoring zones (Figure 5; Column 4, lines 45-50; Column 5, lines 51-57); and monitoring a torque value in each of the monitoring zones during the ejection of the molded product and determining that a malfunction occurs when the torque value falls outside the upper and lower limits of the monitoring zones, and counting the number of malfunctions (Figure 5; Column 1, lines 62-65; Column 4, lines 45-50; Column 5, lines 4-10, 52-57; Column 8, lines 64-67; Column 9, lines 1-9); and raising an alarm when the number of malfunctions occurring within a predetermined time reaches a predetermined number (Column 1, lines 62-65; Column 9, lines 1-9; It is noted that the "predetermined number" of malfunctions is interpreted as being able to include one (1) malfunction. It is further noted that the "predetermined time" is interpreted as being able to include the time for a single ejection step.). Kamiguchi shows using an electric machine, and he does not show using a hydraulic-equipped machine. Ohno shows that it is known to carry out an injection molding control sequence, wherein the functionally-similar control parameters can be applied to both electric and hydraulic machines (Column 2, lines 22-27, 33-34; Column 3, lines 38-48; It is interpreted that hydraulic pressure of an ejector pin would be functionally

equivalent to torque of an ejector pin. It is interpreted that an electric motor would be functionally equivalent to a hydraulic pump.). It would have been prima facie obvious to one of ordinary skill in the art at the time the invention was made to use Ohno's doctrine of equivalence in Kamiguchi's control process in order to make the control process applicable to a wider variety of molding machines.

Response to Arguments

Applicant's arguments filed 9 May 2006 have been fully considered but they are not persuasive.

It appears that applicant is arguing that Kamiguchi does not show the claimed invention because he does not show characterizing the torque of an ejector pin relative to time based on when a molded product is normally removed. This is not persuasive because this limitation is not exclusively claimed. In other words, the claims as presently written can be interpreted to require obtaining a pattern characterizing torque of an ejector pin driving motor relative to (1) time or (2) a position of an ejector pin based on when a molded product is normally removed. The phrase "based on when a molded product is normally removed" does not clearly modify *both* time and position.

However, in any case, the examiner notes that Kamiguchi does teach characterizing the torque of an ejector pin relative to time based on when a molded product is normally removed, as shown at Column 3, lines 9-12.

Conclusion

Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire **THREE MONTHS** from the mailing date of this action. In the event a first reply

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is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the date of this final action.


Any inquiry concerning this communication or earlier communications from the examiner should be directed to Monica A. Huson whose telephone number is 571-272-1198. The examiner can normally be reached on Monday-Friday 6:45am-3:15pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Christina Johnson can be reached on 571-272-1176. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.


Monica A Huson

July 19, 2006


CHRISTINA JOHNSON
PRIMARY EXAMINER
7/20/06